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Motivational Interview Intervention use in Discharge Teaching of Heart Failure Patients

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Discharge Teaching with Motivational Interview Intervention in Heart Failure

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Abstract

It is widely recognized in healthcare that there are many different behavioral choices a patient can make that can have an impact on their health and disease management outcomes. One of the more prevalent diseases that requires consistent compliance is heart failure. The literature suggests that the different areas of management are often something the layperson in the home can have control over, provided they have the confidence and conviction to do so. There is a call for a new way of teaching these patients upon hospital discharge as the old way of lecturing instruction is not effective. It has been observed that Motivational Interview Intervention has been effective in many cases in the area of addiction treatment. While there is limited support in the literature for its use with heart failure patients, there is data that suggests that teaching behavioral change through a true patient-centered approach is more effective than simply providing instruction material and one way discussion. The goal of this health promotion quality improvement project is to provide the nurses who provide this teaching with a new tool that can help facilitate a more two-way change conversation as opposed to conventional methods of teaching. Teaching was prepared and delivered to staff and a tangible “ruler” tool was provided. However given the complexity of the intervention's methodologies as a whole and available time for more effective teaching the results of this intervention were not found and significant results were not appreciated. Given more resources for training, it may be actualized in future implementations to be a more effective intervention.

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Introduction

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Congestive Heart Failure is a disease process that is highly dependent on successful home maintenance. Quality of life for these patients is directly affected by their ability to perform successful symptomatic control. This control is dependent on consistent day-to-day management and compliance to this type of care requires treating the psychosocial as well as the physical spectrum. The patient must learn to rely on their own ability through confidence building and patient-centered involvement in care planning. Motivational Interview Interventions in this quality improvement project will work to start at the center with this planning allowing the patient to create their road-map to care, rather than traditional instruction. The goal was that through patient actualization, education and confidence building, better home management can be performed and carried out over a long term basis. This increase in quality of care will be expected to increase effective symptom control, reducing occurrences of exacerbation, which, over the long run, will reduce hospital readmission rates.

Nursing staff is at the forefront of discharge education delivery within the in-patient setting making it a logical fit to focus efforts on improving teaching methodologies with those nurses delivering this care. As efforts in healthcare extend the lives of individuals, there are more patients that are experiencing both an increase in lifespan and a decrease in structure needed to carry out practices and habits considered part of a self care model. According to Salyer, Shubert and Chiaranai (2011) heart failure was the leading diagnosis among medicare patients (65 and older) and it was identified that the lack of success around self-care was at least partially responsible. Other factors are not mutually exclusive to this cause and, in fact, can help to play a

role in either self-care success or demise. For many, social structure and support is lacking in the home and it might be that the social structure starts with the relationships built with nursing providers during a hospital stay for a heart failure patient. Salyer, et al. (2011) further discuss that not only is a supportive bond important for a patient in order to build confidence, but that "the availability of supportive relationships has been associated with more positive health behavior and health outcomes in several patient populations" (p. 2). Supportive relationships have a direct positive affect on self care behavior as well as an indirect affect by way of improving self-care self confidence (p. 3).

One of the true mechanisms of action with MI intervention is the ability to affect change on the patient's own discrepancies regarding self-care. For many, the initial opportunities for discrepancies to form come from a patient's most recent (and perhaps first) hospital stay. Assessing a patient's response to therapy is the mainstay of what a nurse's duty is in the hospital setting and this is of particular importance due to their already innate ability to present new care information as well as respond to the patient's response to this new information. Gap identification is more likely if the nurse is able to both understand and appreciate heath care delivery goals as well as the patient's discrepancies; discrepancies developed secondary to new teaching. MI intervention is not a method in which to get the patient to “buy in to” the teachings of the provider, but rather it severs to lessen the gap that exists between where the patient is presently and where they want to be on the continuum of health care (Goodwin, Bar, Reid & Ashford, 2009). What will get a patient to the realm of change is first the desire to change and MI is not an intervention to overcome objections, per se, but an intervention that, according to Goodwin, et al. (2009), allows the provider to “elicit and amplify the discrepancy in the eyes of

the client" (p. 205). By identifying the patient's own start point of behavior as well as goals of care, focus becomes on a sense of urgency by the patient; what has been developed from this is "no longer a mere inconsistency between behavior and personal goals, but rather a glaring chasm between the two that emphasizes the urgency of care" (p. 205).

Problem Statement

According to the Center for Disease Control [CDC] Heart Failure affects nearing six million Americans, with 670,000 new cases diagnosed each year (CDC, 2012). It is reported that among just those newly diagnosed, 20% of them will die within the first year (CDC, 2012). The CDC (2012) also reports that by 2010, the annual costs associated with HF totaled just under 35 billion dollars between heath care costs and lost productivity. Morbidity and mortality is directly related to the level of effective self-management of behavioral life style factors such as dietary choices, exercise, medicine compliance and fluid balance (Roger, et al., 2010). Poorly managed factors translate into a poorer quality of life [QOL] contributing to a higher level of morbidity and mortality (Brodie & Inoue, 2005). Patients' resistance to change can be a pervasive emotional hurdle, an antagonist of progress, and providers continue to struggle to effectively change patient behavior in the interest of increasing QOL and reducing costs (Van Nes & Sawatzky, 2010).

Evidence of the Problem

Heart failure [HF] is a "syndrome caused by myocardial muscle dysfunction or loss and characterized by inadequate peripheral oxygen delivery at rest or under stress." (Paradis, Cossette, Frasure-Smith, Heppell & Guertin, 2010, p. 131) Starting at the age of 40, one in five

Americans, considered healthy and free of disease, will be at risk for congestive heart failure [CHF] (American Heart Association, 2011). Due to healthcare's continued efforts to improve life expectancy over the last several years, there are now just under six million Americans suffering from heart failure (Gardetto, 2011) "with an estimated incidence of 660,000 new cases each year" (p. 39). The Center for Disease Control (CDC) (2009) expects that the financial burden from cardiovascular disease in America will reach over $475 billion in 2009 and this burden continues to grow. Positive outcomes in the disease process rely highly on effective self-management; Lagoe, Noetscher and Murphy, (2001) report that in various parts of the United States, congestive heart failure has been one of the most common reasons for acute care readmission. With proper self-management, many of these instances may be avoided, which would decrease health care costs and increase the quality of life for the patient. Dependent on provider involvement, (Boom, Lee & Tu, 2012) there is a higher rate of short term and long term mortality among patients who receive care from a provider other than a cardiologist, specifically acute care and family practice practitioners. This demonstrates that there is a strong need for improvement by all providers, especially those who perform in a teaching capacity, such as primary care providers and discharge nurses. With every hospital discharge comes an opportunity to teach compliance with self-management, with a focus on individual patient behavior. Areas of adherence that rely on a change in behavior include diet patterns, weight monitoring and consistent medication administration. Some of these teaching opportunities already present themselves with an inpatient stay as they become part of the plan of care. For example, a diuretic may be started in the hospital and continued at home; this combined discipline of monitoring fluid input and sodium intake teaching is as important once the patient is home as it is when they

are hospitalized to maintain fluid balance (Kransdorf & Kittleson, 2012). Despite current teaching methods in both the primary care setting and acute care setting, especially during discharge, a lack of compliance remains related to self management. There is strong reason to believe, as discussed by Evangelista and Shinnick (2008), that if the patient is given a plan of care they can comprehend and follow, better outcomes will be achieved. This poses a couple of hypothetical questions: 1.) are we developing a plan of care for discharge that the patient can not understand? Or 2.) are patients not able to follow the plan of care? Furthermore, "the HF literature consistently demonstrates that adherence and self-care behaviors reduced hospital readmissions and led to positive outcomes. However, many patients fail to adopt recommended self-care behaviors, and adherence to various self-care activities continues to be poor among HF patients" (pg. 3).

It was found that a gap in the literature exists regarding MI intervention in cardiac teaching and who is doing the teaching. Nearly all of the literature retrieved discussed reviews or studies of its use from a physician or similarly licensed provider, but lacked its utilization in the discipline of nursing. This gap clearly demonstrated a reasonable need to make use of an intervention that can improve teaching effectiveness with those directly responsible for conducting the largest portion of discharge teaching – the nurse. Furthermore, the current nursing model leads us to start discharging teaching at the time of admission, and such teaching as MI does not have to be confined simply to the last few minutes of a hospital stay. There is reason to believe that if the right questions are asked they can prove effective in initiation or furthering change talk from a patient.

Review of the Literature

Literature review was conducted on the use of MI interventions in patients with a new or existing diagnosis of heart failure. Database search of the existing literature consisted of: National Institute of Health, Ovid, PubMed and CINAHL. The major keywords used were motivational interview(ing), heart failure self care/self management, heart failure stage(s) of change/behavior of change, and heart failure quality of life. One hundred twenty two articles were initially gathered from the databases, which were narrowed to 24 based on relevance. The information included is among the most recent (2005-2011) as it applies to both a need for improvement in self monitoring during the disease process and a Motivational Interview as an intervention to improve levels of self-monitoring.

Motivational Interview is a technique, a style of discussion that takes place between the patient and their "teacher." In order to develop someone into a teacher that can effectively deploy this intervention, the proper training must first take place. A greater level of success is seen in those who are provided more resources than simply an instructional booklet on how to conduct a conversation with MI (Martino, et al. 2010). It has been shown that train-the-trainer programs are most effective when they involve workshops, role playing and observed MI sessions with actual patients. Competencies are increased in clinicians' work, showing that they were not only better able to use these new skills, but that they more closely were used to their full potential (p. 439). There is also support in the literature as discussed by Abramowitz, Flattery, Franses and Berry (2010) that MI benefits overlap into the chronic care model used by those working in primary care internal medicine. Use of MI has suggested both an improvement in confidence "preparing patients to become active participants in management of their chronic conditions" (p. S620).

Thompson, et al. (2011) offer support through secondary meta-analyses of 450 subjects within five studies, which involved both older adult and mixed adult/older adult populations as both inpatients as well as outpatients in primary care, a clinic and the home setting. Brodie and Inoue (2005) examined physical activity through MI intervention in adults 65 or older (n=60) as inpatients with a primary diagnosis of HF. This meta-analyses of five empirical studies (explored patient improvement via diet, exercise, self-care methods and weight loss. Research was primarily randomized control style and groups were either control (using existing methods), intervention (using MI) or a mix of both control and intervention methods. Results showed marked improvement in intervention over control, demonstrating healthier diet habits, a decrease in BMI and self-care. The major limitation to this study is its time-frames of no longer than 6 months, which is a small snapshot of the entire disease process in the patient's life.

Ward, el al. (2010) identify need for improvement of self-monitoring from 52 randomized controlled studies (n=10,388), which includes HF co-morbidity. The meta-analyses established a relationship between effective home monitoring and patient outcome. This makes a case for future consideration of this intervention to be extended to the VNA services that often follow these types of patients in the home setting. However, the research was vague in establishing details of monitoring and their effects, but did offer suggestion to future development of MI and self-monitoring including who to educate, how to educate, when to make changes, what those changes should be and with whom the patient has an ongoing developmental relationship with. Van Nes and Sawatzky (2010) suggest that nurse providers can strengthen their leading role in healthcare by using MI. It was found that there was a profoundly lower rate of successful treatment in patients with cardiovascular disease who were lectured with advise; “it is critical for

patients to set the agenda" (pg. 658). This research discusses that a large part of this process's success is based around building on the patient's desire to change, followed by placing responsibility for reaching goals in a perspective driven by educating them on pros and cons of their decisions.

Paradis, Cossett, Frasure-Smith, Heppell and Guertin (2010) discuss HF patients living at home, through a randomized experimental study, and their success with MI. In their two-stage approach via MI, the patient first identified their own area of desired change giving them a sense of control. Second, the patient's level of commitment and attitude towards the plan of care was recognized during discussion between patient and provider and assessed. Confidence levels were found to be significantly improved suggesting the new approach to providing encouragement is effective. The study was severely limited by its 10 day time frame in which the patient interactions took place. Self-care maintenance and self-care management data were insignificant, likely due to this short time frame. More research is needed involving longer time-frames for better data to examine if behavioral tasks are being carried out and if these new practices stay consistent over time. Data collection and synthesis should consider longer time-frames that may span several years in order to report the most accurate long term results.

The Likert scale has been a particularly useful tool for many in a coaching role and has been used inside and outside of healthcare fields. When used on a larger scale it can provide useful data regarding a series of questions that usually seek to explore a patient's emotional response, or personal feelings towards different subjects, such as levels of agreement about a particular topic. Perhaps one of the most well know applications in healthcare delivery is use for rating pain. Miller and Rollnick (2008) take this one step further in their use of MI intervention

to facilitate change talk with patients. It provides a tangible device that can allow the patient to identify where they see themselves on a scale of desire to change and confidence. Research literature is sparse on specific studies around using this ruler with MI discussion, but one area of strength that the literature does provide is that, when used properly, it can offer consistent results. It was found by Hartley and Betts (2010) that specific scales used with consistent questions suggests more reliable and consistent data from user to user.

Synthesis of evidence

MI has been used for a large spectrum of disease processes that rely on patient change for improvement. Success has been seen in heart failure patients as well as others such as alcohol or diabetes disease. The common theme echoed throughout the literature is that the "old way" is not effective – talking at the patient with instruction is profoundly less effective than a patient-initiated, patient-centered communication method. The patient must feel that they are the creator of change; it cannot be a process of handing down the plan of care from provider to patient. They must create a belief based on feelings of self-actualization on their own terms and develop this one step further toward the concept of owning the change. The ability of the patient to identify their own area of concern has high probability to lead to higher levels of self-encouragement. There is a universal call for an improvement in self-care, and there needs to be an improvement to the vague self-management guidelines despite existing guidelines. MI across all of these studies echoes a common theme witnessed at least suggestively in the research. That is to say that a true collaborative relationship with a provider who addresses psychosocial barriers and instills confidence through competencies may help improve patient outcome. Also, it should be recognized that management with new changes in self-care is an ongoing process. In order to

deliver this type of intervention, it must come from an individual that possesses a sound understanding of the way motivational interview gives structure to the conversation. Trust can only serve to improve the therapeutic relationship the patient has with their care provider and those nurses who deliver care are predisposed with some advantage in forming the type of relationship with a patient that will help to strengthen the effect of MI intervention. In a recent Gallop Poll (Gallop, 2012), it was found that nurses are regarded extremely high as an honest, ethical and trustworthy body in healthcare delivery.

Methods are organized into two categories: Fundamental strategies and Advanced strategies. As taken from Martino, et al.'s (2010) table of definitions of strategies, the first five methods considered are:

1. Open questions – a working knowledge of what open questions are and how they are best used to elicit information from the patient.
2. Reflective statements – a demonstrable use of statements that allow for a summary with an active listening approach thereby acknowledging the patient's own words. This will show that the receiver is not only hearing what is said, but is able to translate what they hear into their own words thereby demonstrating comprehension and appreciation for the conversation.
3. Affirmations – understanding and ability to use these in discussion as they act as “conversational highlighters” that serve to bolster existing strengths that may already exist within the patient.
4. Fostering a collaborative relationship – is the relationship built with mutual engagement, avoiding a “take charge” approach by the provider.

5. Motivational interviewing spirit – is the provider paying attention to what is important to the patient, are they able to identify, understand and show a sensitive, non-judgmental approach that is reactive to the patient's experiences and not their own.

The next five methods are the Advanced strategies, which could be considered “action” strategies.

1. Client-centered discussion – likely one of the more important of all, this competency involves having an understanding of how to converse about topics that the patient feels provoked to address, as opposed to prescribed talking points from the provider. For example, information should be elicited that provides insight to patients' own feelings towards their heart failure diagnosis.
2. Pros/cons and ambivalence – an understanding of this area includes being able to engage the patient in a conversation that not only explores the risk/benefit of intervention, but it also allows the patient to express any perceived positives they might have about their disease, including allowing for their own rationalization to not address the issue – instead of attempting to make a case for treatment, solicit from the patient their thoughts on what is to be gained from not choosing treatment.
3. Heightening discrepancies – the ability to communicate to the patient how lack of (or continued poor) effective self care conflicts with their own identified values and goals
4. Motivation for change – this is where confidence and conviction can be built through discussion with patients encouraging action phrases such as “I will, I can” even “I can try..” versus “but.., I won't be able to.. I don't think I can...” etc.
5. Change planning – at this point we create the road map that ties together what the patient

has already identified on their own and the achievement of these goals. Support systems are put in place and obstacles are both identified and addressed with a plan to overcome them.

According to Miller and Rollnick (2010) these methods exist on foundational characteristics that make up what MI is. 1.) MI is a conversation style that is centered around discussing change, usually with a focus on behavior. 2.) Purposeful evocation of the patient's own existing feelings of motivation, building on these, making them stronger. 3.) Personal collaboration, which may involve different levels of skills; it is the bringing together of individuals with common goals of change. 4.) Honoring autonomy, valuing the patients ability to chose what they believe in and that these choices are their own. 5.) Being evocative, drawing out the patient's own motivation for making a change. 6.) there are particular skills used, one in particular known as O.A.R.S (open-ended questions, affirmations, reflections, summaries). Open ended questions are asked that seek to start a conversation rather than just a one word answer, such as “tell me about,” “what do you think,” and “what else have you thought about this.” Next, affirmation is used to show that we hold what the patient says as true and real. This validates the patient's feelings and helps improve confidence. Then, reflection is used, which can include repeating or paraphrasing what the patient has said. This serves two major functions: to ensure that what the nurse thinks the patient means is actually what they meant and also to personally reflect through repeating to ensure that the nurse has not clouded these thoughts with their own feelings on the subject. Lastly, Summaries provide a way of pulling the information in the conversation together in a way that demonstrates to the patient that the nurse has been listening and appreciating their feelings, which will now be considered as they move through

ambivalence together. 7.) Goal oriented – it seeks to go beyond ambivalence towards an end goal of change. 8.) It draws out and builds on change talk with talking points known as DARN-CAT (Roes, 2009) – Desirability of change, Ability to change, Reasons to change, Need to change. As discussion progress points include talk of Commitment to change, Activation, Taking steps towards change. 9.) seeks to specifically respond to change talk using elaboration, affirmation, reflection and summary. 10.) Resistance response, correcting or pushing back the patient is avoided, in fact a "roll-with-it" approach is used.

Along with these foundational aspects of what makes MI, a specific, consistent tool is needed that can be both easily taught to the user and understood by the patient to whom they will use this with. The literature suggests, however, that there should be consistency to the device used and it should be adopted as the same by all using it to ensure that data is consistent across all applications. Miller and Rollnick (2008) call for two different rulers to be used that consist of a Likert scale with a 1-10 approach. The first ruler is the "Importance" ruler (appendix A); this is used with such assessment questions as: "how important is it to you to weigh yourself every day ?" " how ready are you to take a water pill every day?" or "how important is weight loss to you?" This allows the patient to demonstrate their own inner feelings towards these questions that evoke emotion and also perhaps stress, anxiety and ambivalence. The next phase of the discussion while using this tool is may be counter-intuitive to what many have used in past conversations. What distinguishes MI intervention from other approaches is that it next seeks to ask why the patient has given themselves such a high number and not a lower one. The expectation is that change talk can begin as the patient takes time to think about what they already possess inside them that motivated them to rate as highly as they did (p. 58). For

example, a proper response to the patient rating would be, “I see you rate yourself a 5, why do you feel you are a 5 and not a 1?” The provider of teaching should be careful not to pose the question in the opposite format; for example, “I see you rate yourself a 5, but why aren't you a 9?” This is counter productive for the conversation as it will put the patient in a defensive role, making them feel as if they are already failing expectations. This would lead to further status-quo teaching, eliciting a response known as the “righting-reflex,” which is when the provider works to tip the patient's feelings on a particular subject based on the interest of the provider's own feelings. The second ruler used in discussion is the Confidence ruler (Appendix A). After the provider has established importance, this tool seeks to measure the patient's feelings of certainty. For example, “how confident do you feel you could remember to take your water pill every day.” The provider should follow up with the same question used with the first scale: “why do you give your confidence rating a 5 and not a 1,” for example. It should be pointed out that there are patients that may fall at different points between both of these scales.

As Miller and Rollnick continue to discuss (p. 61), the patient may know that it is important to make the change and can understand good reasons why, but they feel they lack the confidence to do so, placing them in a a state of ambivalence. The opposite may be the case as well, where the patient is confident they can make the change that would effect their health status, but at this time they find that doing so would be of little importance. Reasons for this may vary including not having an understanding of the diseases process, the pros and cons to change and how they might affect their prognosis in the future.

Application of Theory

The Transtheoretical Model [TTM] is an appropriate fit for a behavioral change

intervention such as MI as effective self-management of HF requires change of existing behavior. This behavior is understood as a cluster of modifiable risk factors, which span over a significant period of time. TTM is comprised of five stages, which do not function linearly; instead, the stages move in a move dynamic fashion allowing for the patient to enter the model at any stage and move in either direction (Prochaska & DiClemente, 1983). The typical logical hierarchy is Precontemplation, Contemplation, Preparation, Action and Maintenance (Velicer, et al., 1998). In the Precontemplation stage the patient neither has an understanding nor intention of change. It is within this stage that conversations involve creating an awareness of the risks and benefits to behavioral change. Accountability develops in the second stage known as Contemplation, where there is motivational development through education, including understanding the risks, benefits, pros, cons and impact on avoiding change. The patient can move from Precontemplation simply by considering behavioral change as a goal within a six month window into the future. This is a turning point where the patient gains an interest in putting forth action(s). Third, in the Preparation stage, a collaborative relationship and sense of empowerment develop with the patient and provider. The patient identifies areas of improvement and works to identify tools, resources and a map of goals; confidence building is developed and attitude change is noticeable. Next, the plans are executed in the Action stage, which is where measurable data develops. The last stage, known as Maintenance, works to sustain and reinforce the plan, action and success by reevaluating measurable levels such as daily weights or salt intake with focus on avoiding regression to previous stages (Paradis et el., 2010). TTM and MI work synergistically, making efforts to avoid regression; TTM further supports the use of MI efforts should regression occur based on its cyclical spiral design approach (Fromme, 2011, p.

35).

The TTM and MI interventions are a cyclical spiral continuum, (Goodwin, Bar, Reid & Ashford, 2009, p. 204) that manages unexpected regression by reevaluation and change of the preceding stage. Furthermore, there is no one static starting point for every patient; a patient may enter this continuum at any one stage and move in either direction initially. Together, MI intervention involves self-actualization (the ability to recognize capability) of not only performing change, but also maintaining it through increased confidence and conviction. TTM develops accountability through education of consequences, empowerment through a patient centered plan and confidence needed for improvement (Goodwin et al., 2009).

Description of the Group, Population, Community

The setting for this QI project was a local Western Massachusetts community hospital, which is based in Northampton, Massachusetts. It is a 140-bed acute care facility, which includes 15 critical care, 18 cardiac telemetry and over 40 medical/surgical bed spaces. The organization's staff is comprised of just under 1700 employees – more than 300 physicians and about 350 nurses. The hospital is located in a rural area primarily consisting of Caucasian patients with a small representation of Latino-Americans as well as gay and lesbian citizens. The town population it serves is estimated at 28,000, in addition to the surrounding towns it serves. It served just over 81,000 patients during its last fiscal year (Cooley Dickinson Hospital, 2011) and a large part of this demographic are older adults. From January, 2012 – October, 2012, the hospital discharged 4, 988 patients from in-patient, acute care services. Of those with a heart failure diagnosis, during this past year (Jan-Oct), there were as many as 22% of these patients readmitted within 30 days of discharge; total percentage for this time period equaling 15.5

(Appendix B). Table 1 (see appendix C) describes mortality rates for all ages. It should be pointed out that these statistics on heart failure are specific to CHD and one limitation would include that not all individuals in the local community are represented as some may look to other facilities locally or at a greater distance than CDH for care.

Organizational analysis of project site

At the Cooley Dickinson Hospital all patients admitted with a new or existing diagnosis of heart failure are identified in the chart and a supplemental zone teaching sheet is included in their admission paperwork (see Appendix D). This Zone Teaching sheet is provided as a coaching tool to help the patient identify self care needs and illustrates how to respond to them respectively. However, after discussion with stakeholders, it is uncertain exactly how this tool is used regarding engagement within conversation. It is easily identified as a lecturing tool, and it is unclear as to whether it inherently helps to engage the patient in a centered approach. Either way, it is considered a quality marker and its use is considered part of compliance for a patient with this specific cardiac diagnosis. One major effort of this project is in the interest of giving the existing tools more meaning and creating an environment for discussion where new tools and techniques can help improve on existing devices in place.

Evidence of stakeholder support

Through discussion with Quality Improvement officials at the organization and through review of historical and current data of heart failure patients presented herein, consensus is that a gap remains between an effective plan of care and successful self management in the home. The main key stakeholders include the registered nurses who provide the bedside care to these patients who will be provided the education for this new teaching technique. Additional

stakeholders include those who manage the unit - the Unit Manager and Education Liaison for the cardiac telemetry unit. Also included are the Quality Improvement agents who set goals for greater success, to provide data for further coaching and mentoring of staff in the interest of a higher standard of performance. The Project Manager will maintain a constant dialogue while working close with the Director of Education in the organization, who also serves as the third member of the capstone project committee. This is an appropriate match for this project as it seeks to measure and improve competencies of those whom these individuals preside over from an education standpoint. Managing hospital costs for these readmissions also figure among key stakeholder ranks and include insurance companies for their reimbursement as well as executive management personnel who set financial goals, expectations and forecasts for the budget. As healthcare evolves from an inpatient focus to one that concentrates more on preventative health, including better home management, there is more at stake. The Washington Post reports, in a most recent development, that Medicare will now start holding hospitals more accountable for patient readmission within a 30-day window. The insurer will begin to impose fines for what they consider an excess of patient return based on complications (Associated Press, 2012). Perhaps the largest stakeholder of all is the patient who faces the challenges that present themselves day-to-day regarding effective self-management. The research shows that when there is an increase in better self care there is an increase in the quality of life that the patient will live. Examples are, but not limited to 1.) less frequent emergent visits for healthcare 2.) longer time-frames spent living in their own homes as opposed to facility placement due to mismanaged self-care and 3.) enjoying a longer life, which can create the ability to further enjoy such things as watching grandchildren being raised and enjoying the revered “golden age” of retirement.

At Cooley Dickinson Hospital [CDH] there has been work done to improve competencies among nurses regarding a variety of tasks, including chest tube care, safe lifting and medication administration, however there is sparse data involving nursing competencies as they relate to discharge teaching. In order to comply with reimbursement requirements, there have been some items in paperwork form that have been developed as teaching tools, which also help to quantify that this teaching has taken place in order for reimbursement to take place. However, it is questionable as to how affective these existing tools alone have been considering the data. After discussions with stakeholders, when the organization's last formal CHF teaching nurse left, in 2011, there was no available data found that reflects how effective teaching tools used were, such as the zone teaching sheet. The patient is the major stakeholder when it is questioned whether teaching is delivered with a methodology that comes with a means to have a conversation with the patient during discharge that adds value to the patient, promoting better compliance.

During a discussion that took place between the Project Manager and a discharge home care coordinator, there still exists a great need for improvement. For example, an after-hospitalization service exists, which consists of follow up contact to the patients home via The Care Transitions Intervention. This program does some of its work to develop patient self management skills and transference of skills from from hospital to home; it helps to get the patient more engaged in taking an interest in their care. However, this is not disease specific and is applied to other populations such as COPD. Appendix E shows the worksheet that is currently used by this transitions coach and with a range of one to 10 out of a maximum of 10 points, those who complete it see an average improvement of about 4 points according to the stakeholder.

This is not a mandatory service, however, and each patient can either choose to accept or deny this service when it it offered. It provides at home service follow up to ensure compliance with the different areas that are important to self-care. However, for those who decline the service upon discharge, this is where the idea of care extended into the home ends. It is at this point that the patient is on their own in a matter of speaking and must be trusted to be able to make these care decisions and take action on their own. Furthermore, if the patient does choose to participate in this program, it is for a predetermined length of time, usually not lasting for more than a few weeks and/or a few engagements. After this period of time comes to an end, the patient must then rely on their own confidence and conviction to maintain their own self care given their own local resources. Local discussion took place with key stakeholders that include the Director of Education, Unit Manager, Training Liaison for the unit as well as representatives from the Quality Assurance department. It was a unanimous agreement that the need exists to further close the gap between discharge teaching and noncompliance resulting in repeat hospital admissions. A letter of agreement between both the Project Manager and the Education Director (who will also serve as a third committee member for this project) was drafted, signed and placed on file (Appendix F) with CDH, The University and the Project Manager.

Resources, constraints, facilitators, barriers to implementation

Major themes from discussions with stakeholders was: 1.) time available for teaching during the work day, 2.) the concern over nurse competence/confidence to use a new tool, 3.) apprehensive feelings as to whether a new intervention will make a marked difference in care. The Project Manager provided teaching to staff in a concise, succinct manner that was minimally intrusive on time and productivity. The expected opposition that “we don't have/won't have time

to learn this or deliver this type of teaching" was brought up and will be further discussed in the results narrative section further. This is largely where the beauty of this intervention has been able to shine as it is built somewhat around brevity and the idea of this has helped to guide how the curriculum was designed. Given the resources that are already in place as teaching tools this projects added an additional tool through the conversation ruler use to help facilitate better change talk while nurses use existing tools such as the zone teaching sheet. Resources included staff support as both a resource for data as well as facilitators and promoters of this quality improvement project through their own personal recognizance as established leaders, mentors and coaches. Specifically, coaching and mentoring resources include the Chair, second faculty member and third reader of this project's capstone committee. These individuals were all able to offer real world experience regarding knowledge of nursing practice, barriers to implementation of new practices and how to best translate existing work into new ideas for implementation. Resources also included the clinical time afforded by the University of Massachusetts as part of the immersion experience that was allocated to the planning, execution, data collection, processing and reporting for this project. The Project Manager also had an existing level of computer and statistical knowledge, which aided in the collection, processing and reporting of data.

Other local barriers were the lack of time management; to be able to budget time to have a two way conversation with a patient as opposed to a brief presentation of paperwork requiring their signature. There were some comfort level issues regarding how to have a conversation with a patient that had planted their roots during their hospital stay in the feeling that they simply cannot and will not be able to comply with self-care at home for one reason or another. Data

from 2012, shows that there is very strong compliance from the nurse in providing patients all discharge paperwork as already required per protocol. The core measurement teaching documentation is being delivered to the patient and the gap lies within the circumstances and quality of discussion that is had when this paperwork is processed. The literature discusses that status-quo lecture style in practice does promote growth in change in patients. This additional local data from CDH infers that the organization is doing a commendable job providing information during discharge (see Appendix G, table 2) but the gap lies in how the information delivered, reflected by data showing return visits as seen in Appendix B. Compliance with almost every area is consistent including providing documentation about diet, medication and weight monitoring; smoking data was not available for this core measurement data set. This demonstrates that the methodologies used with these existing tools needed to be further examined, as a need for teaching with more impact is called for.

While the overarching idea of this project was to reduce the readmission rates of those who have been previously hospitalized with HF, the primary goal was to deliver new teaching to nurses who can use this to have an impact on their own patient teaching. That said, a constraint was that this project was not carried out long enough (desire would be >6 months) to see a noticeable and quantifiable difference in re-admission rates, with a certainty of reporting causation rather than correlation. As previously discussed, the lack of historical teaching data around CHF makes creating a benchmark for performance that much harder, but this project promotes the potential to provide data and clarity around its usefulness as this evolves.

Barriers to implementation included effective recruitment of enough nurses to create a large enough sample, consistent follow through in both being receptive to teaching based on time

constraints as well as effective follow through – good utilization of the device. Also, it is known that not all staff on the cardiac unit is regular full time staff and considerations were made as to whether to include those who work in that department semi-regularly as either a float nurse or per diem, by evaluating their average length of service over a given time.

Project design and feasibility

A one group measure design was used. There were two surveys used: one administered after the first teaching session and one and the conclusion of the project. There were a total of thirteen nurses that make up the cardiac unit personnel. Most of this body is of either a part time or full time status. Additionally, there was one float pool nurse included in the thirteen who spends a great majority of her time within this unit. Their competency was measured three times using the motivational interview survey (see appendix H) before the first and second education session, after the second education session, which was about two weeks after the first survey and once again at the final week, which was 3-4 weeks after the second survey. The surveys were identical in questions with an ordinal measure using: strongly disagree, disagree, undecided, agree, strongly agree.

This project addressed the need for more effective patient teaching with a focus on true patient centered approach, with large concepts involving:

- Gather, synthesize and formulate success of the intervention to be coupled with other materials in training sessions as a marketing tool for presenting info to staff.
- Gathering the team of nurses who see most discharges (7a-7p staff) and rally for enthusiasm through education of importance of patient centered approach.
- It was explored through discussion any apprehensions to any change this project brings to

their environment

- Training was delivered of motivational interview intervention through providing examples including role playing; drawing similarities to what some of their practices and goals (that are already in place) provide
- Nurse competencies were measured before and after the train the trainer (nurse) sessions.

There were multiple components to the educational piece for this process improvement project. The main idea was that a ruler tool would be provided and staff will be taught how to use this tool. However, in order to give this any sort of meaning, an understanding of what MI intervention was needed to be in place first. In order to do so, a small curriculum had been created. This was broken into 2 sessions at about 1/2 hour each. During the first session a group discussion was held at two of the staff meetings regarding what MI intervention is, what makes it so, how it can benefit the patient, what the readiness rulers are and how they used. The discussion was guided by the use of a power point presentation (Appendix I) that discusses MI principles, styles, relationships and goals including the use of the rulers. The staff trained were presented with their own rulers for use. To help bolster the confidence of the nurse's use of MI intervention an eleven item checklist (Appendix J) was provided that was printed and laminated and fit to their existing badge lanyard for easy reference during the implementation phase of their teaching (Case Western University, 2011). Concluding the first teaching session, the first Motivational Interview Survey (Willits, Albright, Broidy & Lyons, 2009) was administered to create a baseline for knowledge of MI and its use at the onset of this project.

The 13 question Motivational Interview Survey (Willits, Albright, Broidy & Lyons, 2009) was used to assess the nurses' own confidence and conviction towards the use of MI as well as

their attitudes change and their ability to play a key role in patient behavior modification. This Motivational Interview Survey was originally developed for the New Mexico Department of Corrections Education Bureau for use in their substance abuse division. Each item is rated on a 5-point Likert scale (1=strong disagree to 5=strongly agree). The Psychometric properties of this survey were well supported through high internal consistency reliabilities as seen in Willits et al.'s (2009) study.

At the second teaching session a copy of Miller and Rollnick's article that updates discussion on MI called “10 Things That Motivational Interviewing is Not” was provided for take home review (Appendix K). The second session involved answering questions about any material presented thus far, a review of material from the first session as well as a brief role play to more clearly demonstrate how MI conversations flow. It was highlighted that every conversation with a patient will be different and that the use of MI is not for those who are already embracing change, nor those without any interest in change, but for those who hang in the balances, in a world of ambivalence, where there is room to at least start the conversation and make use of the tool provided to move forward change talk with patients. In the two concluding weeks of the project the second Motivational Interview Survey was administered again. During the implementation phase involving staff's use of MI there was a check in every 3-4 days/weekly to discuss any concerns, barriers, obstacles, questions or further coaching the staff may have.

Goals and objectives with expected outcomes

The main goal of this project was to improve education skills of discharging RN's through educating them on MI intervention, which involves a new teaching methodology better inline with the philosophy of patient-centered plans of care. The aim of this project was to increase

staff knowledge and confidence to create patient-centered care measured by a competency survey before and after they receive two education sessions as well as a final evaluation of competency through the same survey. (Appendix H).

For this project there are multiple measurable expected outcomes that were reported:

1. 80% of all day staff nurses will take the competency training curriculum.
2. 100% of those participating will complete the first training evaluation and first survey.
3. 100% of those participating will complete the second training session.
4. 80% of those participating in the curriculum will report and be able to demonstrate use of the rulers to facilitate conversation with other existing tools.
5. 100% of participants will take the final survey
6. There will be improvement in the Motivational Interview Survey before and after taking the curriculum.

This quality project was conducted specifically within the cardiac telemetry unit of the organization. The majority of patients with a diagnosis of heart failure are > age 60 and for most of them, this is not their first diagnosis or admission for this condition. See table 3 (appendix L) for a description of plan, goal and outcome indicator results.

Costs and plan to obtain resources (budgeting)

The Project Manager conducting the project absorbed the cost of labor including planning, staff communication, arranging agreements, data collecting, entry and analysis. Specific and significant costs to this project were software licensing, printing costs, ruler material acquisition, lamination work and the costs to the nurse's own personal time (reading the take home article). Costs including to whom they apply as well as the benefits of each costs are

shown in Appendix M. It ended up that there was no overtime (outside of a nurse's shift) that was required for any portion of this project, and therefore no overtime payroll expenses occurred. Specific times for implementing training discussions with those participating as nurses was discussed with management in the interest of managing time costs, but maximizing benefits to teaching. Training consisted of a blend of the two 1/2 hour sessions of “on the clock” time as well as take home reading material intended for independent time. One undocumented area of costs for the Project Manager was time spent on self education of the use of MI intervention, including review of literature, publications by its creators and commentators, peer reviewed article review, review of media presentations include slide shows, lecture videos and written narratives that include working examples. The total estimated costs including materials, payroll time, software licensing and personnel incentives is **857.25.** The final cost of this project was just below the predicted cost – software licensing was found to be 75.00 less than originally anticipated, bringing the total cost to **782.25.** Two assets of savings are nurses being able to have more concise and direct conversations with patient while discharge teaching and the presumed benefit of a reduction in re-admission rates; the latter being data that can not be immediately available or appreciated until such time.

IRB approval, ethical considerations

Strong ethical considerations have been made for this quality improvement project. The main purpose of this quality improvement project was to interact with the staff of the organization that will in turn, provide teaching, they are not subject to any level of detectable harm or danger. The personnel was solicited through information sessions that convey what the intervention is, what level of participation is expected of them and how they might take credit at

its completion for playing an integral role in its presumed success. Not at any time was private health information required from personnel and any data required from patient census data was gathered strictly by measurements of populations, without extrapolation of individuals or any identifiers that could link the research or the readers to their identify.

According to Health and Human Services (2011), “the implementation of a practice to improve quality of patient care is not considered research and there by [does] not require IRB approval. Furthermore, data collection around “the implementation of the practice for clinical, practical or administrative purposes is not a satisfactory definition of research as defined by 45 CFR 46.102(D).” This project purpose is to improve the way healthcare is delivered specifically be teaching methodology and it will measure performance of health care provider, the discharge RN, which will help to improve up on clinical and administrative knowledge. Analysis of hospital admissions, readmissions and the collection of stratified data focusing on heart failure is not subject to IRB approval – while the data is based on human subjects, “the investigators cannot readily ascertain the identity of the subjects - data is not obtained through an interaction or intervention with 'living individuals' (i. e. a patient)” Historical data as well as future data that reports this area has already had any individual patient identifiers stripped away.

Evaluation and timeline

This project creation was the product of gaps identified with use of the literature that shows that while there are teaching tools in place and teaching of these specific types of patients is being completed, the question of why are there so many return visits remains. The Project Manager took on the role of a MI intervention teacher, with the intention of improving cardiac nurses' ability to create a plan of care that is one of a patient-centered approach through new

development of change talk. Communication of the project occurred with personal discussions with staff members about the exciting benefits participating in this project can provide. The population involved was the staff of the cardiac telemetry unit involving the 7A-7P staff only (when nearly all discharges take place).

The focus of this project's data collection was that of a quantitative nature – descriptive statistics were employed to summarize nurses' MI competencies. Given the Likert scale used to measure competency, the means and standard deviations are further reported. A paired t-test was used to examine differences in competencies before and after MI education and at the end of the project. Feedback comments were also recorded intermittently throughout the check-in periods to appreciate the staff's feelings and concerns throughout this project. These data were analyzed qualitatively and summarized based on how the project impacts their work flow, challenges and promotes their practice. Any negative effects or comments that could contribute to improvements of the implementation of this project in the future were also collected and summarized.

Data was processed by the Project Manager (JO), which includes data collection, entry, clean up, processing and reporting. Reporting to follow includes a formal written analysis of the findings with a brief description of the processing method and accompanying graphical illustrations. Analysis and reporting has been performed through IBM's SPSS Statistics software and was formatted for organization-wide distribution to celebrate the achievement.

The time frame began upon University approval with the goal of final University approval in early May, 2013. The overall time frame for this project from proposal creation to completion was October, 2012 to May, 2013. Staff training time involved the communication of the project's presence, intention and time-line as well as details around their involvement as

active key players in quality improvement. While there could have been great amounts of time spent on seminars about MI intervention with multiple opportunities for role playing to strengthen skills, given the amount of time for this project a more streamlined approach was used – specifically, the teaching provided specific to one particular tool used in the intervention process. One of the major challenges anticipated was the small time frame in which the project would be conducted. See Appendix N for both details of timeline goals and actual dates these goals were accomplished.

Results

All thirteen nurses were solicited for participation in this project; ultimately 9 competed the curriculum from start to finish. Schedule conflicts, vacations, and being floated off the unit semi-regularly were the major reasons for the difference in the potential pool of participants and the actual turn out. While some had participated partially, for those who did not complete the curriculum throughout, this data was discarded and not considered part of the analysis.

Quantitative Findings

For the purposes of measuring the outcome of this quality improvement project a quantitative approach was made. All participants were considered one homogenous group and had all participated in each of the three phases of survey administration without considerable time differences – each phase was completed within a one week period. The purpose of this quantitative approach was to determine if there was an increase in competence, confidence and conviction on the part of the nurse regarding the intervention. A paired t-test analysis was performed on 1.) first survey, 2.) last survey. For this analysis the goal of 80% of all staff participation was not achieved, resulting in n=9, which should be considered a limiting factor

regarding obtaining the most accurate conclusion. Overall, 70% of the eligible staff participated in the project for its entirety. Of all participants (9) 100% did participate in the first training session and completed the first evaluation survey. Additionally, all participants completed the second training session as well. Also, every participant was able to demonstrate effective use of the confidence ruler given an example situation. They were able to verbalize the importance of the likert scale, how to deliver it in the context of teaching conversation, and how to utilize it to build confidence and conviction with a patient rather than pointing out inadequacies. All staff was also able to give a return demonstration regarding the use of the ruler with existing teaching materials. There was total participation in the final MI survey at the conclusion of the project. In general, the mean average scores from the MI survey improved between the first and final survey, however there was great limitation as to what became a statistically significant change. The first survey provided a benchmark of knowledge after the first teaching session and the following is a summary of the statistical findings on the 1-5 scale:

- Do you have an understanding of the basic ideas and principles of MI (mean=4.22, p=0.17). This demonstrates that the staff had somewhat of a good understanding of principles.
- Do you feel proficient and able to use MI interviewing in your practice (mean=4.11, p=0.08). Staff felt more comfortable than not in their ability to use this intervention in their practice.
- Do you feel that lack of motivation for change is a significant frustration in your practice (mean=3.11, p=0.1). Staff overall felt rather neutral that this was a significant frustration.
- Does your patient's lack of motivation for change significantly frustrate you in your

practice (mean=3.22, p=0.08). Staff weakly agreed that a patient's lack of desire to change frustrates them.

- Do you believe that a patient's own level of motivation for change is important (mean=4.88, p=0.35). There was strong agreement that the patients own level of motivation plays a key factor in their ability to change.
- If the patient isn't initially motivated you do not think that you will be able to increase their motivation (mean=2.44, p=0.11). There was some agreement from staff that they could have an impact on a patient's motivation even if the patient isn't initially motivated themselves.
- Do you feel there is limited administrative support for integrating MI in your work (mean=2.44, p=0.05). Staff did not feel that there were limitations from the administration for using this intervention.
- MI is applicable to your practice (mean=4.11, p=0.08). Staff agreed that it an appropriate intervention for use in their practice.
- You are a skillful listener working with patients (mean=4.33, p=0.35). Staff rather strongly agreed that they see themselves a good listeners with patients.
- You will use MI in your work (mean=3.88, p=0.35). There was a moderately strong level of commitment to use MI intervention in their practice.
- The most effective way to motivate patients to change is by drawing on their own internal motivations (mean=4.11, p=0.01). Staff agreed that drawing on a patient's internal motivation would be helpful for this intervention.
- Some patients may need to be coerced or pressured to change (mean=3, p=1). There was

total neutrality when it came to whether the staff thought some patients might require coercion or pressuring to develop a change.

- Some patients will never change regardless of how you interact with them (mean=3.66, p=1). Staff agreed that there are some patients that will never change regardless of how the nurse takes their approach.

The means scores from the first survey were compared against those of the post-survey. Results varied among the competency areas measured. Understanding of MI and proficiency levels increased only fractionally. When it comes to lack of motivation being a road block in practice feelings on this were more agreeable in comparison to the first survey, but again with fractional differences in the means. There was slightly more improvement in the areas of nurses' capability to increase motivation and having the support to do so from the administration. Staff's thoughts remained unchanged regarding the idea that patients either need to be coerced to change or will just never change. There was only one question that was found to be statistically significant (p=.01), which examined the nurses' attitude that the most effective way to motivate patients to change is by drawing on their own internal motivations, with a mean increase from 4.11 to 4.66 demonstrating an increase in this belief.

Qualitative Findings

While the original concept of this project was to measure competency changes in nurses, it was also realized that there was valuable feedback to collected and analyzed from weekly check-ins with staff. The staffs ability to comment and question before, during and after the process of implementation yielded valuable information for the project manager. This data was collected through sit down conversations with each individual involving note taking of

comments.

When the project was first introduced there was a rather unified belief that with the existing workload it would be very difficult to find the time to incorporate another tool into their work day, citing multitudes of paperwork and computer data entry they already were handling with discharges. Since this was an anticipated barrier, the project manager was able to address this issue by describing and giving examples as to how the beauty is in the brevity when it comes to MI Intervention, which helped to calm and alleviate many concerns. Examples were provided where cases used MI in a matter of no more than a few minutes to change the course and tone of the conversation with patients. It was also discussed that there would be ongoing communication between the project manager and each of them at least twice a week. The first teaching session presented what MI was and the spirit of its use and subjects were reassured that the second teaching session would involve a hands on demonstration with role play examples of how the tool could most effectively be used. While there were some minor tones of concern over time and aptitude for MI use, the overall attitudes were positive, including many comments on the willingness to try anything that might help prevent re-admissions through more effective teaching. The project manager was able to make the most of follow up conversations with participants throughout the project. As there is no consistency to nurses' schedules, their schedule, which extends out one month was obtained so specific days could be scheduled to be sure all participants were targeted during any given week. After both teaching sessions were completed these meetings were conducted weekly, during the nurse's shift. There were often small challenges with the immediate timing of the initiation of these conversations, but all staff provided their best efforts to accommodate at least at some point during their targeted work day.

Opportunities for use varied among staff greatly. Four of the nine nurses cited little or no opportunity to care for patients that fit the demographic for this project. Five other nurses reported being able to incorporate its use in their discharge teaching of HF patients. There was one instance of a qualified patient where the nurse was not able to use the ruler due to impaired patient cognition and the lack of a second caretaker to have a discharge discussion with. One nurse reported the ruler's ability to help move conversation forward when objections were met with new teaching points. Another reported that its use helped her (the nurse) to feel more confident about instilling confidence in the patient being taught. A third nurse pointed out that she also had positive results using the tool with other patients she was discharging including a patient with alcohol addiction. She was encouraged to use the ruler in the future on any like patient who could benefit from its use. Another nurse reported being cognizant of the fact that a patient who is "ready, willing and able" to comply with teaching falls outside the spectrum of who this tool is intended for. A common theme in comments were that it was helpful to be able to pinpoint an exact spot on a numbered scale and be able to illustrate for a patient where they stood, which helped to increase confidence. For example, a patient was asked about how confident they felt about remembering to take their water pill every day as scheduled. When the patient responded with a "3" the nurse was able to avoid asking why the patient couldn't do better, but rather took the approach of "well, if you're a three then tell me more about why you think you are a three and not a one." One area of ongoing discussion with staff was the reality of using the ruler and its effect on increase of time to process a discharge. It was found through these discussion that none of the participants found any significant addition to their time spent with the patient. A paralleling attitude was that even if there was any noticeable time used, the

benefit outweighed the burden, according to two staff members. Check ins remained rather consistent with the project manager missing one week with one nurse due to scheduling. During the last scheduled check in sessions, nurses were asked additional questions not found on the survey. 1.) Have you found this tool to be an overall asset? Four of the nine found it to be a strong asset while the remaining staff found it helpful, but not a center piece to their teaching. 2.) Do you feel you would continue to use the ruler? A general consensus among all participants was that the would enjoy using the ruler for discharge teaching after this project's completion, with one query about its use with other types of patients.

Dissemination of findings

The findings of this quality improvement project describe the impact the use of a new tool for discharge teaching has had with nurses working with a specific demographic of patient population. Copies of reported data were published to be presented to management at the hospital site. A single slide summary of accomplishments made along with a data summary has been provided to participants.

Post project/Future Implementation

There exists many opportunities for further growth using this intervention. It's use could easily be expanded to other patient demographics to include other major disease processes that involve similar complex levels of self-care at home such as COPD and asthma. It could also serve a strong and useful purpose used among different in-patient nursing units throughout the hospital. After multiple informal discussions with visiting nurses (VNA) staff there were several comments about how this tool could be of great use for the environment in which they work in. The project manager was in strong agreement that home bound patients receiving services may

benefit in the area of compliance with the ruler's use – this idea will be presented to the Director of In-Patient Services in the hopes that it might help facilitate a conversation with that division of the hospital. Another area given the time and resources could be further and more extensive training on the use of MI with workshops that include more in depth role playing capability as well as extended follow up with nurses to observe the use of MI "real-time" with patients. As previously mentioned, the literature supports this style of train-the-trainer to create the greatest impact.

Discussion

The purpose of this project was to provide a teaching intervention that could be utilized by nurses who provide discharge teaching to hospital in-patients with a diagnosis of heart failure. Exploration of the available literature supported the idea that patients discharged to home with this diagnosis require at least some level of self care or self care behavioral changes in order to manage their disease process and minimize exacerbation. Data from the project site revealed that this very patient population cared for at their facility suffer from recurrent readmissions, and discussion with stakeholders suggests that these return visits are due to poorly managed self care habits in the home. Teaching for these patients can often be complex involving weight, fluid, medication and diet management. Within this population there are many who struggle with some or all of these areas. Some behaviors have been a part of the patient's lifestyle for many years and many of these patients also suffer with being stuck in a state of ambivalence about making such seemingly drastic changes in their lives. Due to this high level of need for behavioral change this intervention sought to provide nurses who provide this teaching with a tool that could facilitate change discussions with patients during discharge.

Teaching goals for the population of nurses available within this cohort (cardiac telemetry unit nurses working day shift) were set. The recruitment process fell just shy of obtaining it's goal of 80% of staff for participation. However, those who did participate were able to fully complete both the training sessions and the two competency surveys. In addition, there were generally positive feelings about the addition of this tool into their daily workload – many welcomed it with a feeling that they would enjoy any additional help in making their discharge teaching have greater impact.

Motivational Interview interventions are complex skills that often take some time to become comfortable and familiar with, so it was with great intention that a single and specific tool be zeroed in on given the time frame in which to teach it's use and observe its effectiveness. During the teaching sessions there was brief discussion about the spirit of MI and the types of conversations one could have with a patient as change talk evolves and becomes patient-centered. However, one limitation with this project was time constraints limited how much impact could be put behind this methodology. Given that MI itself it not simply one tool or one action, but a “toolbox” of ways to speak and respond to patients, a longer time period to further explore with nurses more of the fundamentals may have proven to be more effective. Another limitation was that teaching was done during shift. The nurses were all able to give individual attention during both of these sessions, but given the fact that it was conducted during shift may have weakened the focus for the most effective learning. Another area for consideration was lack of cohesion regarding addressing the group as a whole. While the project conducted involved the majority of the staff on the unit, there was very limited opportunity to gather more than one individual at a time, which may have been helpful in fostering higher levels of team spirit and

motivation to use the tool. That said, while there were some noticeable increases in nearly all areas of assessment of staff between the first survey and last, the final data did not demonstrate significant findings, indicating that the intervention was not effective.

Future considerations for the project would most certainly include a longer period of time to first teach more of the philosophy and methods to MI intervention. This may provide a greater appreciation as well demonstrate how effective the intervention can be, especially in light of supporting literature. Role playing is supported as one of the strongest methods to create individuals who are strongly competent in MI intervention. Also, due to the work flow of the nurses day, including time limitations, it was difficult to asses the approach in which the nurse was using the intervention. Given a more relaxed atmosphere may have provided for real time oversight of MI use, which could possibly generate valuable feedback about the performance of the nurse.

There was a wide level of reception at the inception of this project; the nurses' were eager to try a tool that would benefit their teaching. Through discussions it was determined that most nurses do feel that their teaching is important and can make a difference, but there is also a shared feeling that “getting through” to a patient is a challenge. It was often reported that the nurse would like to conduct more meaningful teaching and often felt they could if given more time during their work day. The idea of providing this tool was to help bolster their existing teaching, while not severely impinging on time due to its use. Many enjoyed the “beauty in the brevity” but the data suggests that more time is needed to create a stronger level of new knowledge for the nurse to use in their discussions. There is good personnel backing for the continuation of this intervention and given further time and training resources it is likely that

competencies could be greatly improved beyond the experienced levels of this project. Long term potential of this intervention was not able to be actualized. Given that readmission data should be looked at in a window much longer than this project, it is hard to say what impact this has had. A considerably longer time frame of perhaps four to six months followed by a six month monitoring period for readmissions may be more appropriate for the future. Given the time period in which this project was conducted, it would not have been known if there was an affect causing a decrease in rates – given the statistically insignificant results, it would be questionable at best.

Specific recommendations for use of this intervention at this site include additional time provided for more extensive training including opportunities for role play among a peer audience with real-time feedback to help frame examples of strong intervention. Also, the ability to extend these resources to the bedside where competency can be monitored and recorded for future reflection and honing of skills by the provider. It would likely be more effective if teaching was conducted outside of the nurse's regular scheduled shift, preferably on a day when they are not scheduled to work so there might be more attention and focus.

Conclusion

Status-quo teaching methods being used are simply not as effective as they could be in making patient changes and a more patient-centered approach is needed (Rollnick, Miller & Butler, 2008). MI has been used for a large number of disease processes that rely on patient change for improvement. Success has been seen in heart failure patients as well as others such as alcohol or diabetes disease. The common theme echoed throughout the literature is that the “old way” is not effective – talking at the patient with instruction is profoundly less effective than a

patient-initiated, patient-centered communication method. It was found through discussion with nursing staff that this was a shared attitude among the majority. The patient must feel that they are the creator of change; it cannot be a process of handing down the plan of care from provider to patient. They must not "buy into it," but take ownership of change, and do this on their own terms. It was also found that throughout the project that the nurses felt they were better engaging the patients, which helped them to feel that "they owned it" regarding their disease process. The ability of the patient to identify their own area of concern has high probability to lead to higher levels of self-encouragement. There is a universal call for an improvement in self-care, and there needs to be an improvement to the vague self-management guidelines despite existing guidelines. MI across all of these studies echoes a common theme witnessed at least suggestively in the research. That is to say that a true collaborative relationship with a provider who addresses psychosocial barriers and instills confidence through competencies may help improve patient outcome. Also, it should be recognized that management with new changes in self-care is an ongoing process, one with a beginning, but no end.

This project is in its infancy stage when it comes to its potential use to improve outcomes across the organization with patient-centered care with discharge teaching. With this particular project there may have been more statistical significant values found with a slightly larger sample size of nurses. Throughout discussions with others across hospital units there were many comments about its potential use, which opens up new possibilities for larger sample sizes if launched on additional units. Its continuation could better support a more reliable and realistic future data collection regarding decreasing the rate of readmissions. However, at this time, and as it has been previously discussed, the time frame in which this project was performed was not

long enough to observe a reliable window for impact. In conclusion, the intervention proved to be easily taught in small non-intrusive sessions, rather affordable considering materials and education and low in complexity, making it an easy tool for any layperson to use effectively. The project manager firmly believes that with additional time and teaching resources the impact hospital-wide would be rather significant and would better help to align with future financial goals and patient satisfaction goals.

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Appendix A

Appendix B

	Jan 2012	**Feb 2012**	**Mar 2012**	**Apr 2012**	**May 2012**	**Jun 2012**	**Jul 2012**	**Aug 2012**	**Sep 2012**	**Oct 2012**	**total**
Inpatient Discharges	532	475	528	518	518	504	472	473	461	507	4988
% Readmitted within last 30 days	7.724	7.481	9.61	7.011	8.311	10.111	6.59	7.059	8.524	6.009	7.851
% readmitted within last	25.29	26.61	27.59	27.27	26.38	24.55	29.46	26.07	27.49	26.98	26.75

180 days											
% within last 30 days, over age 64	12.734	11.538	15.571	11.811	12.871	17.603	10.04	10.728	12.097	10.672	12.648
CHF - % readmitted within 30 days	22.727	14.286	21.053	18.75	15.789	18.182	6.25	13.333	8.696	14.286	15.508
Actual number of patients readmitted within 30 days	5	2	4	3	3	4	1	2	2	3	29

Appendix C. Table 1. (CDH, 2012) Previous year's history of CHF mortality

	Month										Total
CHF – all ages	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	
Mortality rate	4.348	6.667	0	0	0	0	0	0	4.167	4.545	**2.094**
Numerator	1	1	0	0	0	0	0	0	1	1	**4**
Denominator	23	15	19	16	19	22	16	15	24	22	**191**

Appendix D (CDH, 2010)

Zone Teaching for Heart Failure – Page 1

Write Down Your Weight						
Be sure to call your doctor if you have a 3 pound weight gain						
Admit day	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
____lbs.	____lbs.	____lbs.	____lbs.	____lbs.	____lbs.	____lbs.
Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	Day 14
____lbs.	____lbs.	____lbs.	____lbs.	____lbs.	____lbs.	____lbs.

Teach back/Identified Learner_____

Teach back	**Was the patient able to teach back the information**

questions					
	Admit Day	Day 2	Day 3	Day 4	Day 5
What is the name of your water pill?	1 Yes 1No	1 Yes 1No	1 Yes 1No	1 Yes 1No	1 Yes 1No
What level of weight gain and symptoms should you report to your doctor?	1 Yes 1No	1 Yes 1No	1 Yes 1No	1 Yes 1No	1 Yes 1No
What are three high-salt foods that you should limit/avoid?	1 Yes 1No	1 Yes 1No	1 Yes 1No	1 Yes 1No	1 Yes 1No

Page 2

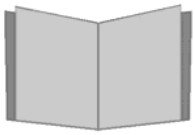
Green Zone: Your symptoms are under control	Green Zone Means:
6. No weight gain more than 3 pounds	6. Self care is your goal!

7. no swelling of your feet, ankles, legs or stomach 8. No shortness of breath 9. No chest pain	7. Take your medications as ordered 8. Daily weight before breakfast 9. Low salt food intake 10. Plan activities and get enough rest 11. Keep all doctor appointments
Yellow Zone: This zone is a warning when: 1. Your weight goes up 3 pounds 2. you have swelling in your feet, ankles, legs or stomach 3. You have shortness of breath, or a dry hacky cough 4. You have a problem breathing when you are laying down 5. You feel more tired and have less energy 6. You know something doesn't feel right	Yellow zone means: Your symptoms may mean that you need an adjustment in your medication. Call your VNA office or Physician VNA office_____ Dr._____ Phone_____
Red Zone: MEDICAL ALERT WHEN: - Your shortness of breath has increased - You have chest pain	Red zone means: You may need to be evaluated by your physician right away!

➢ You have confusion or can't think clearly ➢ You have increased restlessness or nervousness ➢ You feel like fainting or passing out	Call Immediately!

Appendix E

Name: _____

Patient Activation Assessment			
Level of Performance (Please rate: 1 point each)			
			
Medication Management	**Red Flags**	**Medical Care**	**Personal Health Record (PHR)**
___Demonstrates effective use of Medication Management System (medication organizer, flow chart, etc.) ___For each medication, understands the purpose, when and how to take, and possible side effects ___Demonstrates ability to accurately update medication list ___Agrees to confirm medication list with PCP and/or Specialist	___Demonstrates understanding of Red Flags, or warning signs that condition may be worsening ___Reacts appropriately to Red Flags per education given (or understands how to react appropriately)	___Can schedule and follow through on appointment(s). ___Writes a list of questions for PCP and/or specialist and brings to appointment	___Understands the purpose of PHR and the importance of updating PHR ___Agrees to bring PHR to every health encounter
Sum: /4	**Sum: /2**	**Sum**: /2	**Sum: /2**
Total Score: /10			

Appendix F

UNIVERSITY OF MASSACHUSETTS AMHERST **School of Nursing**
Skinner Hall
651 North Pleasant Street
Amherst, MA 01003-9304 **413-687-2626**

January, 2013

To Whom It May Concern:

I am the Director of the DNP Program at the University of Massachusetts, Amherst, School of Nursing. I am writing this letter on behalf of **Jason O'Brien, RN, BSN**, your student preceptee. Your student is in the final year of the DNP program, is a DNP Candidate, and is planning to complete the final requirement for the Degree, a Capstone Scholarly Project, in your facility. Your student will be designing, implementing, and evaluating the effect of translating a programmatic intervention into your practice or setting. As these projects are considered performance improvement or program evaluation projects and not research studies, the University does not require Institutional Review Board permission for this student to actualize the project as outlined by the student. I am using this letter as a "Key Stakeholder" commitment letter for the student to use in the Capstone Scholarly Project Proposal. A Graduate faculty member of the School of Nursing will, also, be working directly with your student as Chair of the Capstone Scholarly Project.

Thank you in advance for allowing this student to actualize the Capstone Project in your facility. If you have any questions, please call me at 413-687-2624 or email jdemart@nursing.umass.edu.

Key Stakeholder Signature: _____Date: _____

Student Signature: _____ Date: _____

Sincerely,

Jean E. DeMartinis
Jean E. DeMartinis, PhD, FNP-BC
Associate Professor
Director DNP Program

Appendix G. Table 2. (CDH, 2012) Past year's history of discharge teaching compliance by nurse

Instructions provided at discharge	% Monthly data for 2011, through Oct									
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Activity	100	100	100	100	100	100	100	100	92.86	100
Diet	100	100	100	100	100	100	100	100	100	100
Follow up	100	100	100	100	100	100	100	100	100	100
Medication	100	100	100	100	100	100	100	100	100	100
Worsening symptoms	100	100	100	100	100	100	100	100	100	100
Weight monitoring	100	100	100	100	100	100	100	88.889	92.857	100
Eval of LVS function	100	100	100	100	100	100	100	100	100	100

ACEI or ARB for LVSD	80	100	100	100	100	66.667	100	100	100	100
Smoking cessation counseling	-	-	-	-	-	-	-	-	-	-

Appendix H

Motivational Interview Survey

Please take a moment to consider each question, and answer as honestly as possible, the following questions about your experience with this new approach to teaching. Thank you!

Questions	Strongly disagree	Disagree	Undecided	Agree	Strongly agree
I understand the basic ideas and principles of motivational interviewing	☐	☐	☐	☐	☐
I feel proficient and able to use motivational interviewing in my practice	☐	☐	☐	☐	☐
Lack of motivation for change is a significant frustration in my work	☐	☐	☐	☐	☐

Questions	Strongly disagree	Disagree	Undecided	Agree	Strongly agree
My patient's lack of motivation for change is a significant frustration in my work	☐	☐	☐	☐	☐
I believe that a patient's own level of motivation for change is important	☐	☐	☐	☐	☐
If a patient is not initially motivated, I do not think that I will be able to increase their motivation	☐	☐	☐	☐	☐
There is limited administrative support for integrating MI into my work	☐	☐	☐	☐	☐
Motivational Interviewing is applicable to my practice	☐	☐	☐	☐	☐
I am a skillful good listener in working with patients	☐	☐	☐	☐	☐

Questions	Strongly disagree	Disagree	Undecided	Agree	Strongly agree
I will use Motivational Interviewing in my work	☐	☐	☐	☐	☐
I think that the most effective way to motivate patients to change is by drawing on their own internal motivations	☐	☐	☐	☐	☐
Some patietns need to be coerced or presured to change	☐	☐	☐	☐	☐
Some patients will never change regardless of how I interact with them	☐	☐	☐	☐	☐

Motivational Interview Final Survey

Please take a moment to consider each question, and answer as honestly as possible, the following questions about your experience with this new approach to teaching. Thank you!

Questions	Strongly disagree	Disagree	Undecided	Agree	Strongly agree
I understand the basic ideas and principles of motivational interviewing	☐	☐	☐	☐	☐
I feel proficient and able to use motivational interviewing in my practice	☐	☐	☐	☐	☐
Lack of motivation for change is a significant frustration in my work	☐	☐	☐	☐	☐
My patient's lack of motivation for change is a significant frustration in my work	☐	☐	☐	☐	☐
I believe that a patient's own level of motivation for change is important	☐	☐	☐	☐	☐

Questions	Strongly disagree	Disagree	Undecided	Agree	Strongly agree
If a patient is not initially motivated, I do not think that I will be able to increase their motivation	☐	☐	☐	☐	☐
There is limited administrative support for integrating MI into my work	☐	☐	☐	☐	☐
Motivational Interviewing is applicable to my practice	☐	☐	☐	☐	☐
I am a skillful good listener in working with patients	☐	☐	☐	☐	☐
I will use Motivational Interviewing in my work	☐	☐	☐	☐	☐
I think that the most effective way to motivate patients to change is by drawing on their own internal motivations	☐	☐	☐	☐	☐
Some patietns need to be coerced or presured to change	☐	☐	☐	☐	☐

Questions	Strongly disagree	Disagree	Undecided	Agree	Strongly agree
⅄ Some patients will never change regardless of how I interact with them	□	□	□	□	□

Appendix I (See attached power point file) or

http://www.diabetesinmichigan.org/PDF/pdfUPDON/MotiveInterviewingppt.pdf

Appendix J

Encouraging Motivation to Change – Am I doing this right?

1. Do I listen more than I talk? (or am I talking more than I listen)

2. Do I keep myself sensitive and open to the patient's issues whatever they may be? (or am I talking about what I think the problem is)

3. Do I invite this patient to talk about and explore their own ideas for change? (or am I jumping to conclusions and possible solutions)

4. Do I encourage this patient to talk about their reasons for *not* changing? (or am I forcing them to talk only about change)

5. Do I ask permission to give my feedback? (or am I presuming that my ideas are what they really need to hear)

6. Do I reassure this patient that ambivalence to change is normal? (or am I telling them to take action and push ahead for a solutions)

7. Do I help this patient identify successes and challenges from their past and relate them to present change efforts (or am I encouraging them to ignore or get stuck on old stories)

8. Do I seek to understand this patient? (or am I spending a lot of time trying to convince them to understand me and my ideas)

9. Do I summarize for this patient what I am hearing? (or am I just summarizing what I think)

10. Do I value this patient's opinion more than my own? (or am I giving more value to my viewpoint)

11. Do I remind myself that this patient is capable of making their own choices? (or am I assuming that they are not capable of making good choices)

Appendix K

10 Things Motivational Interviewing is Not. – see attachment or http://ihatetherapy.com/wp-content/uploads/2010/07/miller-09-pdf1.pdf

Appendix L Table 3. Plan, Goal and outcome indicator

Plan	Goal	Outcome indicator
First teaching competency session. Completion of first survey	80% of nurses will complete first competency training session and survey	70% of nurses completed first competency training session, 100% of those completed the first survey
Second teaching competency. Provide confidence rules, badge checklist and Miller article as described above	100% of those who completed the first session will complete the second session	100% of nurses who completed the first session completed the second
Demonstrate use of the ruler	80% of nurses will be able to demonstrate a competent use of the ruler	100% of nurses were able to demonstrate competent use of the ruler
Completion of Post-survey competency	100% of those participating will complete the post-survey Improvement in staff knowledge and confidence in MI	100% of nurses completed the post-survey. Increase in Motivational Interview Survey score

Appendix M: Costs/Benefits

Responsible Party	Material & Cost	Benefit to project
Project Manager (DNP Candidate)	1. Printing of articles and teaching materials = 18.00	1 Effective way to convey information during discussion, material can be referenced to later.
	2. Lamination of teaching tool = 15.00	2. Easily referenced key points that nurse can refer to for their own confidence that main ideas of MI are being utilized/recognized
	3. Teaching Rulers = 49.25	3.Tangible device to facilitate discussion with patient and illustrate perceived level of readiness/confidence.

	4. Participation incentives (i.e. gift cards/certificates for local businesses) = est. 150.00 5.SPSS Data Software = 125.00	4. Provides motivation for staff to participate as well as strive for excellence among their peers. 5. Data collection, processing, reporting
CDH	2 1/2 hour teaching sessions after scheduled shift = Avg OT costs 48.00/hour = 480.00. Use of small bulletin board/poster board and materials to construct = est. 20.00	Improvement of self change teaching to patient, facilitation of discharge teaching with stronger impact; long term goal of decreased admission rates with more meaningful previous discharge teaching.
Total estimated costs	**875.25**	

Appendix N

Time Frame of Activities and Goals

Milestones	Goal Dates	Actual Dates
Recruitment of Nurses	2/1/13	02/03/13
Conduct first 1/2 hour training session and administer first survey	2/15/13	02/14/13
Conduct second 1/2 hour training session	2/30/13	02/28/13
Monitor for use/questions/concerns/comments	Weekly from 3/1/13 – 4/10/13	3/1/13 – 4/12/13
Data collection, processing, reporting	4/10/13-4/16/13	4/12/13-5/1/13

Synthesize, discuss findings in final draft	4/30/13	05/14/13
Final presentation to school and CDH	TBD (May)	

Appendix O Table 4. Quantitative Findings

	Pre-intervention Score		**Post-intervention Score**			
	Mean	**SD**	**Mean**	**SD**	**Paired TT**	**P Value (2tailed)**
Q1	4.22	0.44	4.44	0.52	-1.51	0.17
Q2	4.11	0.6	4.44	0.73	-2	0.08
Q3	3.11	1.05	3.55	1.23	-1.83	0.1
Q4	3.22	0.83	3.55	1.13	-2	0.08
Q5	4.88	0.33	5	0	-1	0.35
Q6	2.44	0.88	3.22	1.48	-1.79	0.11
Q7	2.44	1.01	3.11	0.92	-2.3	0.05
Q8	4.11	0.33	4.44	0.52	-2	0.08
Q9	4.33	0.5	4.22	0.66	1	0.35
Q10	3.88	0.33	4	0.5	1	0.35
Q11	4.11	0.33	4.66	0.5	-3.16	0.01*
Q12	3	0.86	3	1.11	0	1
Q13	3.66	0.7	3.66	1.32	0	1

* = statistically significant with a P value < 0.05